

Namibia - Community-Based Rangeland and Livestock Management

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Overview

Identification

COUNTRY

Namibia

EVALUATION TITLE

Community-Based Rangeland and Livestock Management

EVALUATION TYPE

Independent Impact Evaluation

ID NUMBER

DDI-MCC-NAM-IE-AG1-2014-v1

Overview

ABSTRACT

This is a mixed methods impact evaluation that randomly assigned which geographic areas were eligible to receive the program. The quantitative data collection and analysis conducted for the study will be complemented by qualitative information.

Innovations for Poverty Action (IPA) has been tasked with a mixed methods evaluation of the Community-Based Rangeland and Livestock Management (CBRLM) program, a sub-activity of the Namibia Compact, with a major component of the evaluation being a randomized controlled trial (RCT). The CBRLM program is a multi-year intervention implemented by GOPA Consortium which looks to benefit cattle farmers in the northern part of the country through technical assistance in the areas of community development, rangeland management, livestock management, livestock marketing, and targeted infrastructure support (including substantial investment in water access). At the heart of the program are a series of community-based natural resource management strategies that look to mitigate persistent 'tragedy of the commons' type problems that have the potential to negatively impact livelihoods, rangeland, and livestock in the region.

Currently, however, there is limited rigorous evidence on the effectiveness of community-based natural resource management programs of this kind. Expert opinion is divided on everything from the sustainability and scalability of the approach to the necessary set of enabling conditions. Still, the popularity of community-based interventions continues to grow. Therefore, this evaluation represents an excellent opportunity to substantially guide policy-making using sound evidence, both in Namibia and in other low-to-medium income countries.

EVALUATION METHODOLOGY

Randomization

UNITS OF ANALYSIS

Individuals within Rangeland Intervention Areas (RIAs), which are intervention zones with commonly agreed upon boundaries, common authority, and predefined (by the program implementer) characteristics such as fencing and accessibility.

KIND OF DATA

Sample survey data [ssd]

TOPICS

| Topic | Vocabulary | URI |
|----------------------------|------------|-----|
| Agriculture and Irrigation | MCC Sector | |

Coverage

GEOGRAPHIC COVERAGE

The CBRLM sub-activity covers parts of seven regions in northern Namibia: Kunene, Omusati, Oshana, Oshana, Oshana, Oshikoto, Kavango East, and Kavango West.

UNIVERSE

Cattle-owning households in the Northern Communal Areas of Namibia

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

| Name | Affiliation |
|--------------------------------|-------------|
| Innovations for Poverty Action | |

FUNDING

| Name | Abbreviation | Role |
|----------------------------------|--------------|------|
| Millennium Challenge Corporation | MCC | |

Metadata Production

METADATA PRODUCED BY

| Name | Abbreviation | Affiliation | Role |
|----------------------------------|--------------|-------------|-------------------|
| Millennium Challenge Corporation | MCC | | Metadata Producer |

DATE OF METADATA PRODUCTION

2014-11-06

DDI DOCUMENT VERSION

Version 1.0 (2014-11-06)

DDI DOCUMENT ID

DDI-MCC-NAM-IE-AG1-2014-v1

MCC Compact and Program

COMPACT OR THRESHOLD

Namibia Compact

PROGRAM

The CBRLM program aimed to improve livelihoods of cattle farmers in the Northern Communal Areas (NCAs) of Namibia by providing technical assistance in the following areas: community development, rangeland management, livestock management, livestock marketing, and targeted infrastructure support (including substantial investment in water access). At the heart of the program is a series of community-based natural resource management strategies that attempt to mitigate persistent 'tragedy of the commons' type problems that have negatively affected rangeland, livestock and, ultimately, livelihoods in the NCAs.

MCC SECTOR

Agriculture and Irrigation (Ag & Irr)

PROGRAM LOGIC

The CBRLM program was organized around five areas that were all aimed at improving household well-being: community development, rangeland management, livestock management, livestock marketing, and targeted infrastructure support (including substantial investment in water access). As immediate outputs of the intervention, participants, field staff, and government partners were trained on improved rangeland and livestock management practices; committees were organized for communal grazing areas and boundaries were defined; livestock cooperatives were established and auctions conducted; and water infrastructure was upgraded. Short-term outcomes included grazing area committees functioning with the implementer's support; participants implementing the improved rangeland and livestock practices; livestock cooperatives becoming more functional; increased capacity and motivation of staff and government partners to support these efforts. Expected intermediate outcomes included grazing area communities functioning autonomously; measurable improvements in cattle and rangeland quality; increased marketing opportunities and offtake; and continued support from government and community leaders for the CBRLM practices. Ultimately, the intervention is expected to lead to an increase in household incomes and a reduction in poverty.

PROGRAM PARTICIPANTS

The program focused on cattle-owning households in the Northern Communal Areas of Namibia.

Sampling

Study Population

Cattle-owning households in the Northern Communal Areas of Namibia

Sampling Procedure

The 41 RIAs in our sample were randomly assigned to either Treatment or Control. For primarily political reasons, the RIAs were stratified on a single variable: affiliation with a Traditional Authority (TA). This was to ensure that at least half of every politically-sensitive TA was included in the CBRLM intervention. IPA then checked whether random assignment was correlated with any of the variables identified by GOPA as potentially important determinants of the intervention's success. If a nontrivial level of correlation was detected, we re-randomized the sample and then reran the balancing diagnostics until stratified, balanced lists were produced.

Deviations from Sample Design

The original sampling strategy for data collection - i.e., the strategy that was followed at baseline - was ultimately deemed unviable due to insufficient overlap between the areas surveyed at baseline and the areas of program implementation. As a result, IPA has endeavored upon a revised sampling strategy, which was completed in 2014.

The original sampling strategy was based on GOPA's ex-ante expectations of where the organization would generally focus its early implementation efforts (i.e., the "green areas"). However, over the course of 2011 it became apparent that many of GOPA's actual implementation efforts were happening outside of these pre-identified areas. Therefore, in November of 2011, MCC and MCA-Namibia helped convene a series of meetings in which IPA and GOPA used ArcGIS mapping technology to roughly estimate the level of take-up in "green areas" versus non-"green areas" within treatment RIAs. The key take-away from these meetings was that the upper bound for take-up in "green areas" was approximately 25%, which fell well short of the 70% take-up rate upon which the initial statistical power calculations had been based.

Response Rate

Cattle Assessment: 76%

Household: 78%

Weighting

Household: In order to analyze poverty on a per capita basis, weights first had to be created for the household. Using the Namibian Central Bureau of Statistics 2008 Review of Poverty and Inequality in Namibia, a weight of 0.5 was assigned to children under the age of 5; 0.75 to children between the ages of 5 and 16; and 1 to persons over the age of 16. To control for 58 | Livestock Ownership and Livelihood Baseline Survey Report economies of scale, the weight assigned to the household was raised to 0.9 as suggested by Deaton and Zaidi for poorer, agricultural economies where the majority of consumption expenditure go to food stuffs.

Questionnaires

Overview

Cattle Assessment: The Baseline CBRLM Cattle Assessment was designed to capture both cattle-level variables (e.g., age, sex, weight, etc) as well as information about the herd and family husbandry practices of the owner or caretaker respondent. The questionnaire design was led by IPA with input from MCC, MCA-N, and GOPA. In order to adequately capture information on the herds, two instruments were created: one that captured self-reported herd information from the farmer or caretaker respondent, and a second which captured cattle data. In addition to the instruments, the survey teams were provided with physical scoring sheets which contained examples of different cattle conditions in an attempt to standardize condition scores across enumerators.

Household: The CBRLM household questionnaire was designed to better understand rangeland management practices and household wellbeing in respondent areas in order to improve the success of projects meant to support farmers in local communities. The questionnaire was developed by NORC with coordination with IPA and MCA-N as well as comment by other stakeholders. A second questionnaire for the village head was developed by IPA to determine payout for the behavioural activities.

Data Collection

Data Collection Dates

| Start | End | Cycle |
|------------|------------|------------------------------|
| 2011-04-20 | 2011-06-21 | Household (Baseline) |
| 2011-04 | 2011-06 | Games (Baseline) |
| 2012-10 | 2012-11 | Cattle Assessment (Baseline) |

Data Collection Notes

The core of the qualitative piece of the evaluation is focus group discussions overseen by trained moderators and note-takers. Each focus group discussion includes roughly 6 to 12 individuals from two (and sometimes three) proximate GAs to ensure broad representation and provoke conversation about different experiences. Moderators use a focus group script with between 10 and 15 questions (i.e., 120 to 160 minutes-worth of questioning), including pre-designed probes to elicit deeper discussion about key issue areas.

Data collection for the Baseline CBRLM Cattle Assessment was done using an electronic surveying method, in this case, netbooks and Blaise software.

Questionnaires

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Data Collectors

| Name | Abbreviation | Affiliation |
|--|--------------|-------------|
| AgriEnviro Consultants (Cattle Assessment) | | |

Supervision

The in-field training was monitored by the SW Field Manager, NORC staff, MCA-N personnel, and IPA staff. The first week and a half of the field period was monitored by IPA staff as well as monitoring by the SW Field Manager. A second field monitoring trip was taken by both IPA staff and the SW Field Manager. A third party Data Quality Review (DQR) Team was present for the in-field training as well as a separate review during the third week of data collection.

Data Processing

Data Editing

The surveys were completed using paper surveys. The data was subsequently double entered and cleaned by Survey Warehouse using the programme Epi Data. Questionnaires missing items on the critical item check-list were still data entered, but flagged as incomplete."

Other Processing

Data analysis will be done using the statistical software package, STATA.

Data Appraisal

No content available